

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 February 2005 (03.02.2005)

PCT

(10) International Publication Number
WO 2005/010061 A1

(51) International Patent Classification⁷: **C08F 20/18**,
C07C 67/14, 69/54, G02B 6/00, C07B 59/00

MUTO, Kazushige [JP/JP]; c/o Wako Pure Chemical
Industries, Ltd., Chemical Products Research Laboratories,
1633, Oaza Matoba, Kawagoe-shi, Saitama 3501101 (JP).

(21) International Application Number:
PCT/JP2004/010869

(74) Agent: **SIKS & CO.**; 8th Floor, Kyobashi-Nisshoku Bldg.,
8-7, Kyobashi 1-chome, Chuo-ku, Tokyo 1040031 (JP).

(22) International Filing Date: 23 July 2004 (23.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-278951 24 July 2003 (24.07.2003) JP

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(71) Applicants (*for all designated States except US*): **FUJI
PHOTO FILM CO., LTD.** [JP/JP]; 210, Nakanuma,
Minami-ashigara-shi, Kanagawa 2500193 (JP). **WAKO
PURE CHEMICAL INDUSTRIES, LTD.** [JP/JP];
1-2, Doshomachi 3-chome, Chuo-ku, Osaka -shi, Osaka
5408605 (JP).

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

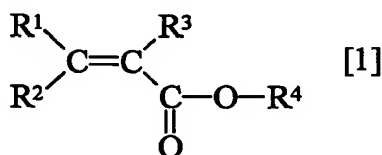
(75) Inventors/Applicants (*for US only*): **SASAKI, Hiroki**
[JP/JP]; c/o Fuji Photo Film Co., Ltd., 210, Nakanuma, Mi-
nami-ashigara-shi, Kanagawa 2500193 (JP). **MAESAWA,**
Tsuneaki [JP/JP]; c/o Wako Pure Chemical Industries,
Ltd., Chemical Products Research Laboratories, 1633,
Oaza Matoba, Kawagoe-shi, Saitama 3501101 (JP). **ITO,**
Nobuhiro [JP/JP]; c/o Wako Pure Chemical Industries,
Ltd., Chemical Products Research Laboratories, 1633,
Oaza Matoba, Kawagoe-shi, Saitama 3501101 (JP).

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: **HEAVY-HYDROGENATED NORBORNYL (METH)ACRYLATES, PROCESS FOR PRODUCING THEM, POLY-
MERS THEREOF AND OPTICAL MEMBERS**



(57) Abstract: A novel compound represented by a formula [1] wherein R¹ and R² respectively represent a light or heavy hydrogen atom, R³ represents a light or heavy hydrogen atom or a methyl group in which three hydrogen atoms are respectively light or heavy hydrogen atoms, and R⁴ is a norbornyl group provided that four or more hydrogen atoms in the norbornyl group are heavy hydrogen atoms; and a novel polymer produced by polymerization of a composition comprising the compound are disclosed.



WO 2005/010061 A1